

1. (Withdrawn) A filter cartridge for filtering a slurry composition comprising:

a hollow housing having an inlet and an outlet,
said hollow housing being filled with a filtration medium and
being free of an open void volume upstream of said filtration
medium,
said filtration medium comprising depth filter segments separated
by annular spaces.

2. (Withdrawn) The filter cartridge of Claim 1 wherein the filtration medium is formed of a depth filter, the filtration medium being divided into a plurality of segments by two or more spacers spaced apart from each other along an inner length of a filter cartridge housing, the two or more spacers having one or more openings to allow fluid to pass therethrough along a defined path defined by the configuration of the open portions of the two or more spacers.

3. (Withdrawn) The filter cartridge of Claim 1 wherein the hollow housing has a first end containing the inlet and the outlet, a conduit within said housing providing fluid communication from said inlet to a second end of said housing, said hollow housing being filled with a filtration medium in the form of a depth filter, said filtration medium being divided into a plurality of segments by two or more spacers spaced apart from each other along the length of a filter cartridge housing, each of the two or more spacers having one or more openings to allow fluid to pass through along a defined path defined by the configuration of the one or more openings of the two or more spacers.

4. (Withdrawn) The filter cartridge of Claim 1 wherein said filtration medium is a depth filter selected from the group consisting of a wound depth filter formed of nonwoven fibers, a stack of sheets wherein each sheet comprises nonwoven fibers and a fibrous mass of nonwoven polymeric fibers secured together by a mechanical entanglement of the fibers.

5. (Canceled) The process for filtering a slurry to remove undesirably large particles from said slurry which comprises:

passing a slurry through an inlet to a filtration cartridge, through a conduit positioned within a filtration cartridge comprising the conduit, a housing, a depth filter positioned within said housing and an outlet and from said conduit through said depth filter,

said cartridge being free of an open void volume which causes separation of particles from said slurry upstream of a top surface of said depth filter in contact with said slurry,

said depth filter comprising depth filter segments separated by annular spacers and recovering a filtered slurry which has passed through said depth filter from said outlet of said filtration cartridge.

6. (Currently Amended) The process of Claim 5 22 wherein said depth filter segments are selected from the group consisting of a wound depth filter comprising nonwoven fibers, a stack of sheets wherein each sheet comprises nonwoven fibers and a fibrous mass of nonwoven polymeric fibers secured together by mechanical entanglement of the fibers.

7. (Currently Amended) The process of Claim 5 22 wherein said slurry is selected from the group consisting of a silica-based slurry, an alumina-based slurry, a ceria-based slurry, a diamond-based slurry and a MnO₂-based slurry, a cell broth, a photoresist chemical, a fermentation liquid, blood, a blood fraction and a transgenic liquid.

8. (Currently Amended) The process of Claim 5 22 wherein said slurry is selected from the group consisting of a silica-based slurry, an alumina-based slurry, a ceria-based slurry, a diamond-based slurry and a MnO₂-based slurry.

9. (Currently Amended) The process of Claim 5 22 wherein said slurry is selected from the group consisting of a cell broth, a photoresist chemical, a fermentation liquid, blood, a blood fraction and a transgenic liquid.

10. (Withdrawn) The process of Claim 5 wherein said slurry is transgenic milk.

11. (Withdrawn) The process of Claim 5 wherein said slurry is selected from the group consisting of blood and a blood fraction.

12. (Withdrawn) The filter cartridge of Claim 1 wherein the spacers are configured to seal the inner surfaces of the filter cartridge housing to prevent channeling of the fluid being filtered along the inner surfaces of the housing.

13. (Withdrawn) The filter cartridge of Claim 1 wherein the spacers are formed of annular inner spacers and annular outer spacers throughout the height of the housing.

14. (Withdrawn) The filter cartridge of Claim 1 wherein the spacers can be retained in position by retainers.

15. (Withdrawn) The filter cartridge of Claim 1 wherein the spacers are retained in position I by retainers and the retainers are snap rings which fit into grooves of the interior wall of the housing.

16. (Withdrawn) The filter cartridge of Claim 1 wherein the spacers have an open central volume portion.

17. (Withdrawn) The filter cartridge of Claim 1 further comprising small spaces formed between the filter segments adjacent the spacers.

18. (Withdrawn) The filter cartridge of Claim 1 further comprising small spaces formed between the filter segments adjacent the spacers and wherein the spaces have a height of less than about 0.12 inch (0.3048 cm).

19. (Withdrawn) The filter cartridge of Claim 1 further comprising small spaces formed between the filter segments adjacent the spacers and wherein the spaces have a height of less than about 0.09 inch (0.2286 cm).

20. (Withdrawn) The filter cartridge of Claim 1 wherein the spacers have an internal spacer segment and an external spacer segment connected together by two or more ribs.

21. (Withdrawn) The filter cartridge of Claim 1 wherein the spacers have an internal spacer segment and an external spacer segment connected together by two or more ribs and the internal spacer has one or more ribs.

22. (New) The process of filtering a slurry to remove undesirably large particles from a slurry with a filtration cartridge having a housing, an inlet to said housing, a conduit within said housing in fluid communication with said inlet, a first outlet from said conduit in fluid communication with a depth filter comprising depth filter segments separated by annular spacers surrounding said conduit and a second outlet from said housing, said filtration cartridge being free of an open void volume having a height greater than about 1 inch which causes separation of desirably sized particles from said slurry upstream of a first surface of said depth filter in contact with said slurry, said annular spacers having a height between about 0.01 and about 0.12 inch, the ratio of the height of said depth filter segments to the height of said annular spacers being between about 1:1 and about 5:1, the annular spacer having an open portion and a solid portion, which comprises passing said slurry sequentially through said inlet, through said conduit, through said first outlet, through said depth filter and through said second outlet.